In the claims:

1. (currently amended) An ultrasonic flow sensor, comprising

at least one ultrasonic transducer for transmitting and receiving ultrasonic

signals, and

a receiver unit (4) connected to the at least one ultrasonic transducer that

detects a predetermined event (N) of an ultrasonic signal as a reception time (t_0),

wherein the receiver unit (4) determines a time (t_1) of a characteristic value of the

ultrasonic signal as well as a time shift (Δt) of the time (t_1) relative to the

reception time (t_0) and

uses the time shift (Δt) to determine a correct time value for the reception

time (t_0), wherein the receiver unit (4) determines a chronological position (T_s) of

a focal point of either the ultrasonic signal or its envelope curve (6) as the

characteristic value wherein

$$T_s \sim \left(\sum_{K=1}^{n} K * A(K) \right) / \sum_{K=1}^{n} A(K)$$

2. (cancelled)

3. (cancelled)

4. (previously presented) The ultrasonic flow sensor as recited in claim 1,

wherein the receiver unit (4) includes a comparator (10) comprising inputs that

are respectively supplied with a transducer output signal (5) and a reference

signal (SW), and the receiver unit (4) determines a piece of information about the time (t_1) of the characteristic value from an output signal of the comparator (10).

5. (previously presented) The ultrasonic flow sensor as recited in claim 4, wherein the reference signal supplied to the comparator (10) is a threshold (SW) not equal to zero and the output signal of the comparator (10) is a pulse width modulated signal (K1) from which the time (t_1) of the characteristic value is determined.

6. (previously presented) The ultrasonic flow sensor as recited in claim 1, wherein the reception time (t_0) is corrected as a function of the time shift (Δt).

7. (currently amended) A method for detection of an ultrasonic signal in an ultrasonic transducer by means of a receiver unit (4), which detects a predetermined event (N) of the ultrasonic signal as a reception time (t_0), wherein the receiver unit (4) determines a time (t_1) of a characteristic value of the ultrasonic signal and determines a time shift (Δt) of the time (t_1) in relation to the reception time (t_0) and uses the time shift (Δt) to determine a correct time value for the reception time (t_0), wherein the receiver unit (4) determines a chronological position of a focal point of the ultrasonic signal or its envelope curve (6) as a characteristic value, <u>wherein</u>

$$Ts \sim \left(\sum_{K=1}^{n} K * A(K) \right) / \sum_{K=1}^{n} A(K)$$

8. (cancelled)

9. (cancelled)